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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/466,963	12/20/1999	Paul Kevin Reeser	2685/5374	1788

7590 08/27/2003

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EXAMINER	
THOMSON, WILLIAM D	

ART UNIT	PAPER NUMBER
2123	8

DATE MAILED: 08/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/466,963	REESER ET AL.	
	Examiner	Art Unit	
	William D. Thomson	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 December 1999* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Claims 1-22 have been submitted for examination.

2. Claims 1-22 have been examined and rejected.

Drawings

3. Applicant filed informal drawings for the instant specification. These drawings are acceptable for examination purposes. The drawings have not been reviewed by the draftsman.

Claim Interpretations and Common Knowledge in the Art

4. The examiner has given the claims their broadest reasonable interpretation. The still level in the art has been determined to be ones ordinary skill level at the masters level in the field of network and communication engineering modeling and design. Specifically, one of ordinary skill level should possess the common knowledge equivalent to that of Kleinock series 1975 and 1976, Gross et al. "Fundamentals of Queuing Theory" 1998 , scheduling and analytical queuing models of Bertsekas and Gallager 1992, S. Keshav "An Engineering Approach to Computer Networks" 1997, Stevens 1997 and Stallings 88, work on TCP/IP and networking, respectively, George Coulouris et al. "Distributed Systems Concepts and Design" 1994 and 1998, A. Tanenbaum's series on Computer Networks 1989 to 1997, Mischa Swartz,

"Telecommunications Networks, Protocols, Modeling, and Analysis" 1987, R. Jain "The Art of Computer Systems Performance Analysis" 1991, underlying constructs of web servers, client-server models, routers, bridges, hubs, brouters, gateways, TCP/IP and general operations of networking protocols, and their equivalent models for engineering design. Further, should possess a general working knowledge of commercial/free simulators for network design and stressing systems available at the time of filing such as: REAL, BONES, COMNET, MIL3, MATLAB with Simulink, QTSPlus, Mercury Interactive's visual web testing systems like: Load Wizard, LoadRunner, or Sitetest, and IBM's WebRunner systems for stressing web servers.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Menasce et al. "Capacity Planning for Web Performance, Metrics, Models and Methods", 1998 (hereinafter referred to as CPWP(98) in view of Li et al. (792) or Waclawsky et al. (127).

CPWP(98) is explicit in teaching the models for constructing the queuing systems that cover the web servers and other Internet systems that interact with the web servers including software, intermediate devices such as routers, protocols (TCP/IP) and web server operations to include HTTP and HTML rendering times (entire book is directed to this topic, especially chapters 9-12). However does not go into great detail as to combining the metrics with these models for interactively and iteratively improving the network server operations as is clearly delineated in Li et al. and Waclawsky et al., individually. One of ordinary skill level in the art at the time the invention was made would have implemented the queuing models of CPWP(98) with the traffic measurement, statistical matching operations with queuing analysis as taught in both Li et al. and Waclawsky et al. (Li et al.(792): Abstract, Figures 1-49, col. 9, lines 66 et seq. ; Waclawsky et al.(127): Abstract, Figures 1-14, col. 3, lines 11 et seq.) thereby yielding correct models for the network being designed and improved, in this case the network device is the web server(s) of CPWP(98). The networks in both Waclawsky et al. and Li et al. are not specific to web server queuing operations as is explicitly taught in CPWP(98). The analytical web queuing models as taught in CPWP(98) are equivalent to those recited in claims and could constitute anticipatory prior art, however, though analytical in nature their implementation with respect to the queuing matching

with the metrics of the real system for iteratively improving the system model are not clearly spelled out. Li et al and Waclawsky et al. expressly use the real world statistical information from the network device to improve the models and then use those models to improve the system interactively and iteratively. (Li et al.(792): Abstract, Figures 1-49, col. 9, lines 66 et seq. ; Waclawsky et al.(127): Abstract, Figures 1-14, col. 3, lines 11 et seq.)

Simulation of queuing systems that model network devices was extremely well known and common knowledge prior to applicant's invention. The use of queuing models to improve the design of network operations was equally well known and common knowledge. The CPWP(98) provides clear network equivalent queuing models for the web server network device. Li et al. and Waclawsky individually teach using queuing systems with models and real world statistics to improve the operation of general networking devices and systems. The modification of either Li et al. or Waclawsky with the models as taught in CPWP(98) would have been obvious to one of ordinary skill level in the art of network and communication engineering at the time the invention was made. (Li et al.(792): Abstract, Figures 1-49, col. 9, lines 66 et seq. ; Waclawsky et al.(127): Abstract, Figures 1-14, col. 3, lines 11 et seq.)

Conclusion

7. The prior art made of record, see PTO 892, and not relied upon is considered pertinent to Applicant's disclosure, careful consideration should be given prior to Applicant's response to this Office Action.

8. A shortened statutory period for response to this action is set to expire 3 (three) months and 0 (zero) days from the mail date of this action. Failure to respond within the period for response will result in ABANDONMENT of the application (see 35 U.S.C. 133, M.P.E.P. 710.02, 710.02(b)).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William Thomson whose telephone number is (703) 305-0022. The examiner can be usually reached between 9:30 a.m. - 4:00 p.m. Monday thru Friday. Voice mail is checked throughout the day. Please leave a detailed message including the serial number.

Facsimile numbers are as follows:

Official: 703-872-9306

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Mr. Kevin Teska, can be reached on 704-305-9704.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is 703-305-3900.

William D. Thomson
Patent Examiner
A.U. 2123
August 24, 2003